

To: Card, Joan[Card.Joan@epa.gov]
From: Perrin, Rebecca
Sent: Tue 8/11/2015 8:05:26 PM
Subject: FW: Agriculture Guidelines for metals

Joan,

I was given info from UDAF regarding metals and animal ag discussion the state agency was having. I have deleted all the forwarding emails between different Utah state officials so you can see the original questions and the answer provided by Utah State University related to livestock health and metals. It was mentioned that Dr. Hall was concerned that "EPA may not test for chemicals that are more problematic to remediate".

I am not sure (1) who is looking at the data from EPA to share this info with; (2) if they have seen this or (3) if the info is useful to them. However, I thought you would want to know the right people to share it with for them to decide if this is useful or not. I let UDAF staff know I would forward this info to the appropriate EPA folks.

Rebecca Perrin

Region 8 Agriculture Advisor | Office of the Regional Administrator | USEPA

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From: Jeffery Hall <jeffery.hall@usu.edu>
Date: August 10, 2015 at 5:24:35 PM MDT
To: Warren Hess <wjhess@utah.gov>
Subject: RE: Agriculture Guidelines for metals

Dr. Hess,

Of the analytes reported in the spreadsheet, I find none of the values to be of concern for

livestock health. The Manganese is slightly greater than the 50 ug/L reported in some literature

as the safety threshold in livestock, but that threshold had been primarily based on a poor taste

threshold value for humans. In work I performed at USU no rumen microbial effects were observed

at < 500 ug/L. As soluble manganese is potentially redox reactive, a significant first effect should be

to the rumen microbial health. Thus, values of 105 to 120 should not pose a significant health risk.

However, significant contaminants, that are commonly encountered in mine waste and could adversely

impact animal health, were not included in the testing results. Some of these could also impact the utility

of the water for other agricultural uses (irrigation). These additional potential contaminants are as follows:

1. Ph
2. Nitrate
3. Nitrite
4. Sulfate
5. Phosphate

Sincerely,

Jeffery O. Hall, D.V.M., Ph.D., Diplomat A.B.V.T.

Professor, Head of Diagnostic Toxicology

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----- Forwarded message -----

From: **Craig Dietrich** <dietrich@utah.gov>

Date: Mon, Aug 10, 2015 at 12:56 PM

Subject: Agriculture Guidelines for metals

To: Melissa Ure <mure@utah.gov>

Cc: Sam LeFevre <slefevre@utah.gov>, Nathan LaCross <nlacross@utah.gov>

Hi Melissa,

I'm the environmental toxicologist with the UDOH. As you are aware, there is a potential impact to waters of the San Juan River in southeast Utah as a result of a mine-water spill in Colorado along the Animas River. UDOH and UDEQ will be having a conference call with the San Juan Health Department tomorrow morning and I'd like to invite you to that discussion (details in a following email).

Also, I would like you to review the attached excel spreadsheet that details water guidelines for livestock and irrigation. I've researched this as we believe there may be questions regarding water use for livestock and irrigation and there is a limited number of metals that Utah has set agriculture criteria (listed on the table).

The majority of the guidelines come from the National Academy of Sciences 1972 report: Water Quality Criteria (the Blue Book). Here is a link, though I'm sure you have a copy:

[http://nepis.epa.gov/Exe/ZyNET.exe/2000XOYT.TXT?ZyActionD=ZyDocument&Client=EPA&Index=Pr
&MaximumDocuments=1&FuzzyDegree=0&ImageQuality=r75g8/r75g8/x150y150g16/i425&Display=p%](http://nepis.epa.gov/Exe/ZyNET.exe/2000XOYT.TXT?ZyActionD=ZyDocument&Client=EPA&Index=Pr&MaximumDocuments=1&FuzzyDegree=0&ImageQuality=r75g8/r75g8/x150y150g16/i425&Display=p%/)

Some values come from two other cited sources (sources attached).

I'd like to know:

- Are the NAS standards also recommended by Utah Department of Agriculture, and if not, are there more appropriate sources for guidelines.
- I've identified some gaps in the agriculture data (the no available data cells) and I'd like to know if you know of other information that may be out there.

The sample data that we are evaluating was collected just above Durango, CO (about 20 miles south of the spill site). UDEQ is sampling the Utah waters that may be impacted, they expect to get some data today/tomorrow.

I'll send along the info for the conference call and I look forward to any feedback you may have.

Have a great day,

Craig

--

Craig J. Dietrich, Ph.D., DABT
Toxicologist

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